

The diagram illustrates a video recording system with the following components and connections:

- 1 DRUM** and **2 HEAD**: Part of the tape transport mechanism.
- 3 CAPSTAN MOTOR**: Drives the tape transport.
- 4 SWITCH**: A double-throw switch that routes the signal from the tape to either the **REPRODUCE AMPLIFIER (11)** or the **RECORD AMPLIFIER (14)**.
- 5 SWITCH**: A double-throw switch that routes the signal from the **CTL HEAD (7)** to either the **CTL REPRODUCE AMPLIFIER (8)** or the **CTL RECORD AMPLIFIER (13)**.
- 6 MAGNETIC TAPE**: The source of the video signal.
- 7 CTL HEAD**: Provides control signals to the **CTL REPRODUCE AMPLIFIER (8)** and **CTL RECORD AMPLIFIER (13)**.
- 8 CTL REPRODUCE AMPLIFIER**: Amplifies control signals for reproduction.
- 9 PHASE CONTROL CIRCUIT**: Receives input from the **CTL REPRODUCE AMPLIFIER (8)** and provides feedback to a summing junction (+).
- 10 SPEED CONTROL CIRCUIT**: Receives input from the **CTL REPRODUCE AMPLIFIER (8)** and provides feedback to the summing junction (+).
- 11 REPRODUCE AMPLIFIER**: Amplifies the video signal for reproduction.
- 12 DECODER**: Decodes the reproduced video signal.
- 13 CTL RECORD AMPLIFIER**: Amplifies control signals for recording.
- 14 RECORD AMPLIFIER**: Amplifies the video signal for recording onto the tape.
- 15 ENCODER**: Encodes the video signal for recording.
- 16 MONITOR**: Displays the reproduced video signal.
- 17 FG** (Field Frequency) signal: Derived from the tape transport mechanism and fed into the **PHASE CONTROL CIRCUIT (9)** and **SPEED CONTROL CIRCUIT (10)**.
- 18 PG** (Pulse Generator) signal: Derived from the tape transport mechanism and fed into the **DRUM FF CIRCUIT (19)**.
- 19 DRUM FF CIRCUIT**: Provides feedback to the **PHASE CONTROL CIRCUIT (9)** and **SPEED CONTROL CIRCUIT (10)**.



FIG. 14 PRIOR ART

